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10/620,857

07/15/2003

Brian G. Payton

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08/22/2006

INTERNATIONAL BUSINESS MACHINES CORP

IP LAW

555 BAILEY AVENUE , J46/G4

SAN JOSE, CA 95141

EXAMINER

COLAN, GIOVANNA B

ART UNIT

PAPER NUMBER

2162

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/620,857 | <b>Applicant(s)</b><br>PAYTON ET AL. |  |
|                              | <b>Examiner</b><br>Giovanna Colan    | <b>Art Unit</b><br>2162              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-19,22-36 and 39-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-19, 22-36, 39-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is responsive to the Amendment filed on 04/17/2006.
2. Claims 1, 18, 34, and 35 were amended. Claims 3 – 4, 20 – 21, and 37 – 38 were canceled. Claims 52 – 54 were added.
3. This action is made Final.
4. Claims 1 – 2, 5 – 19, 22 – 36, 39 – 54 are pending in this application.
5. Applicant's arguments filed on 04/17/2006 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2162

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1 – 8, 15 – 19, 2 – 25, 32 – 36, 39 – 42, 49 – 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banning et al. (Banning hereinafter) (US Patent No. 5,421,008) in view of Murray et al (NPL: “Kaleidoquery: A Visual Query Language for Object Databases”, ACM Press 1998).

Regarding Claims 1, 18, and 35, Banning discloses an article of manufacture comprising a computer carrier readable by a computer and embodying one or more instructions executable by the computer, the computer program providing a query assist tool for assisting a user in creating and/or editing a query statement (Col. 5, lines 6 – 11, Banning), the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement (Col. 5, lines 16 – 18, Banning), the user interface comprising:

a) program instructions for visually displaying a search condition of a query statement in a first display area of the user interface (Fig. 2, item 53, Col. 7, lines 58 – 65, Banning); and

b) program instructions for visually selecting two or more predicates of the displayed search condition for grouping (Fig. 2 and 14, item 51 and 574/573, Col. 8, and 30, lines 6 – 12 and 7 - 11, Banning<sup>1</sup>); and

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<sup>1</sup> Predicates are considered to be elements, such as, DEPT, SALARY, YEAR, JOB, DEPT, and MANAGER. This predicates are listed in the displayed search condition of Banning's disclosure (Fig. 2, item 53). In addition, other predicates would be YEAR>25 and SALARY>60000.

program instructions for visually indicating the grouping in the first display area in response to selection of the two or more predicates (Col. 30, lines 12 – 13, Banning).

However, Banning is silent with respect to a grouping including indentation, adjacent positioning, or delineation by a symbol. On the other hand, Murray discloses a method including means for indicating grouping comprising one or more of the group consisting of: indenting the grouped predicates relative to other predicates of the search condition (Page 251 and 253, para.46 and 61, lines 4 – 10 and 4 – 5; respectively, Murray); positioning the grouped predicates adjacent to each other (Page 253, para. 61, line 5, Murray); and delineating the group with parenthesis or an equivalent symbol (Page 251 and 253, para. 46 and 61, lines 8 – 10 and 6 – 7; respectively, Murray). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Murray, including the teachings of indentation, adjacent positioning, and group delineation with symbols, to the system and method of Banning to provide a highly organized and structured method to display queries, and provide novice query language users with a clear and understandable view of complex queries, for example, nested ones. Skilled artisan would have been motivated to do so, as suggested by Murray (Page 256, para. 12, lines 1 – 4, Murray), in order to organize the structures and ordering results that support a more dynamic evolution of queries. In addition, both of the references (Banning and Murray) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases

management systems, query visualization, and grouping predicates. This close relation between both of the references highly suggests an expectation of success.

Regarding Claims 2, 19, and 36, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for selecting further comprises program instructions for highlighting the two or more predicates (Fig. 2, item 51, DEPT and MANAGER, Col. 8, lines 10 – 12, Banning).

Regarding Claim 5, 22, and 39, the combination of Banning in view of Murray discloses all the limitations as disclosed above including a selecting predicates for grouping. In addition, the combination of Banning in view of Murray discloses a system and method for confirming the delete operation handled by a user. However, in an alternative embodiment, the combination of Banning in view of Murray discloses a confirmation of operation (Fig. 12, item 536, Col. 1, lines 59 – 62, Banning). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Banning in view of Murray to include a confirmation of selection of the delete operation to be used with grouping procedure. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to do so, in order to give users the capacity of validate and corroborate the selection of two or more grouped predicates for grouping.

Regarding Claims 6, 23, and 40, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for indicating grouping are responsive to selection confirmation (Col. 29, lines 62 – 64, Banning<sup>2</sup>).

Regarding Claims 7, 24, and 41, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing (Fig. 12, item 536, Col. 29, lines 59 – 64, Banning).

Regarding Claims 8, 25, and 42, the combination of Banning in view of Murray discloses an article of manufacture, further comprising program instructions for causing a model instance to be updated with the selected grouping upon confirmation (Col. 29, lines 62 – 64, Banning<sup>3</sup>).

Regarding Claim 15 – 16, 32 – 33, and 49 - 50, the combination of Banning in view of Murray discloses all the limitations disclosed above including displaying query

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<sup>2</sup> Banning discloses how the delete is completed when the user clicks ok. Because of the reasons explained in claim 5, the action of deleting after the user clicks on the confirmation window would correspond to indicating grouping after the selection confirmation.

<sup>3</sup> Banning discloses that after the user performs the confirmation, the update is performed in the system (Col 29, lines 62 – 64). In addition, Banning discloses that after the user selects the grouping of the predicates, the update of the selection is performed (Fig. 14, items 574 and 576).

predicates in a first display area (Fig. 2, Col. 2, lines 54 – 57, Banning<sup>4</sup>). However, the combination of Banning in view of Murray is silent with respect to displaying each search predicate in a different line of the first display area (Claims 15, 32, and 49), nor displaying each operator in a separate line of the first display area (Claims 16, 33, and 50). On the other hand, the combination of Banning in view of Murray discloses a system and method for displaying predicate queries including displaying operators and predicates in different lines of a display area (Page 251, para. 46, lines 1 – 10, Murray). It would have been obvious to one of ordinary skills in the art at the time the invention was made to display search predicates and operators in separate lines of the display area in order to provide users with better visualization of the predicates and operators of the queries.

Regarding Claim 17, 34, and 51, the combination of Banning in view of Murray discloses an article of manufacture, further comprising program instructions for receiving a query statement from an application for populating the interface (Col. 4 and 5, lines 57 – 64 and 6 – 11; respectively, Banning).

Regarding Claim 52, the combination of Banning in view of Murray discloses a query assist tool further comprising:

means for displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

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<sup>4</sup> Items 56, 53, and 51, Fig. 2 are located in same (first) display area.



Regarding Claim 53, the combination of Banning in view of Murray discloses a method further comprising:

displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

Regarding Claim 54, the combination of Banning in view of Murray discloses an article of manufacture further comprising:

program instructions for displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

9. Claims 9 – 14, 26 – 31, and 43 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banning et al. (Banning hereinafter) (US Patent No. 5,421,008), in view of Murray et al (NPL: "Kaleidoquery: A Visual Query Language for Object Databases", ACM Press 1998), and further in view of Goldberg et al. (Goldberg hereinafter) (US Patent Application Pub. No. 2005/0004911 A1).

Regarding Claims 9, 26, and 43, the combination of Banning in view of Murray discloses all the limitations as disclosed above including grouping query predicates based on users selection and a method for selecting grouped predicates (Col. 29, lines

Art Unit: 2162

56 – 59, Banning<sup>5</sup>). However, the combination of Banning in view of Murray is silent with respect to using the selecting method for grouped predicates for ungrouping. On the other hand, Goldberg discloses a graphical condition builder for facilitating database queries including ungrouping grouped predicates (Fig. 8, item 804, Page 9, [0092], lines 4 – 8, Goldberg). It would have been obvious to one of ordinary skills in the art at the time the invention was made to add the teachings of Goldberg, including ungrouping grouped predicates, to the system and method of the combination of Banning in view of Murray to provide a way to reverse or undo operations performed by users, such as grouping. Skilled artisan would have been motivated to do so to give users advanced capabilities, such as, fixing incorrect grouping of predicates.

Regarding Claims 10, 27, and 44, the combination of Banning in view of Murray and further in view of Goldberg combination discloses an article of manufacture, further comprising program instructions for removing the indications of grouping from the first display area in response to the step of selecting grouped predicates (Fig. 12, items 532 and 536, Col. 29, lines 56 – 64, Banning; Fig. 8, items 804 and 802, lines 4 – 8, Goldberg).

Regarding Claims 11, 28, and 45, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above including a selecting grouped predicates for ungrouping (Fig. 8, item 804, Page 9, [0092], lines 4

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<sup>5</sup> By clicking on the AND node, user is selecting the grouped predicates: YEAR> 25 and SALARY>60000.

Art Unit: 2162

– 8, Goldberg). In addition, the combination of Banning in view of Murray and further in view of Goldberg discloses a system and method for confirming the delete operation (Fig. 12, item 536, Banning). It would have been obvious to one of ordinary skills in the art at the time the invention was made to modify the combination of Banning in view of Murray and further in view of Goldberg teachings related to confirmation of selection of the delete operation to be used to the ungrouping procedure of the combination of Banning in view of Murray and further in view of Goldberg. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to do so, to give users the capacity of validate and corroborate the selection of two or more grouped predicates for ungrouping.

Regarding Claims 12, 29, and 46, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and furthermore discloses an article of manufacture, further comprising program instructions for removing the indications of the grouping from the first display area in response to selection confirmation (Fig. 12, items 532 and 536, Col. 29, lines 56 – 64, Banning; Col. 29, lines 62 – 64, Banning<sup>6</sup>; Fig. 8, items 804 and 802, Page 8, [0092], lines 4 – 8, Goldberg).

Regarding Claims 13, 30, and 47, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and

Art Unit: 2162

furthermore discloses an article of manufacture, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing (Fig. 12, item 536, Col. 29, lines 59 – 64, Banning).

Regarding Claims 14, 31, and 48, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and furthermore discloses an article of manufacture, further comprising program instructions for updating a model instance with the selected ungrouping upon confirmation (Col. 29, lines 62 – 64, Banning<sup>7</sup>; Fig. 8, items 804 and 802, Page 8, [0092], lines 4 – 8, Goldberg).

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<sup>6</sup> Banning discloses how the delete is completed when the user clicks ok. Because of the reasons explained in claim 5, the action of deleting after the user clicks on the confirmation window would correspond to indicating grouping after the selection confirmation.

***Response to Arguments***

1. Applicant argues that the prior art fails to disclose; “visually indicating the grouping of predicates using at least one of indenting the grouped predicates relative to other predicates of the search condition; positioning the grouped predicates adjacent to each other; and delineating the group with parenthesis or an equivalent symbol in the same display area that a search condition is depicted”.

Examiner respectfully disagrees. The combination of Banning in view of Murray does disclose visually indicating the grouping of predicates (Col. 30, lines 12 – 13, Banning) using at least one of indenting the grouped predicates relative to other predicates of the search condition (Page 251 and 253, para.46 and 61, lines 4 – 10 and 4 – 5; respectively, Murray); positioning the grouped predicates adjacent to each other (Page 253, para. 61, line 5, Murray); and delineating the group with parenthesis or an equivalent symbol in the same display area that a search condition is depicted (Page 251 and 253, para. 46 and 61, lines 8 – 10 and 6 – 7; respectively, Murray). Therefore, the combination of Banning in view of Murray not only suggests but also suggests the claimed invention (see Office Action rejection above).

Furthermore, as discussed in this Office Action, the combination of Banning in view of Murray and further in view of Goldberg has been presented to reject the

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<sup>7</sup> Banning discloses that after the user performs the confirmation, the update is performed in the system (Col 29, lines 62 – 64).

Art Unit: 2162

limitations including ungrouping grouped predicates (Fig. 8, item 804, Page 9, [0092], lines 4 – 8, Goldberg) and confirmation of selection (Fig. 8, item 804, Page 9, [0092], lines 4 – 8, Goldberg; and Fig. 12, item 536, Banning).

2. Applicant cannot show non-obviousness by attacking references individually where, as here, the rejections are based on a combination of references.

In re Keller, 208 USPQ 871 (CCPA 1981).

***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Prior Art Made of Record***

1. Banning et al. (US Patent No. 5,421,008) discloses a system for interactive graphical construction of a data base query and storing of the query object links as an object.
2. Murray et al (NPL: "Kaleidoquery: A Visual Query Language for Object Databases", ACM Press 1998, New York, NY, USA).
3. Goldberg et al. (US Patent Application Pub. No. 2005/0004911 A1) discloses a graphical condition builder for facilitating database queries.
4. Banning et al. (US Patent No. 5, 721, 900) discloses a method and apparatus for graphically displaying query relationships.



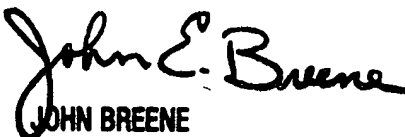
***Points Of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan  
Examiner  
Art Unit 2162  
July 25, 2006

  
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